Efficacy of Comprehensive Child Birth Preparation Package on Child birth experiences and Maternal-Neonatal Outcomes among Primigravidae in selected health centre of Noida, Uttar Pradesh.

SYNOPSIS SUBMITTED

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INTRODUCTION

A woman gets a "New Life" when she gives birth to a child. Maternal and Neonatal complications are the major focus of health care nowadays. Instead of child birth experience of the women, much emphasis is on neonatal and obstetrical outcomes[1].

Giving birth to a child, is a turning point in life of a woman. The process of birthing and the care a woman receive during birthing has a tremendous long-term effect, physically as well as emotionally. One of the major factors that effects a woman child birth experience is the labour pain and her response to it.[2] Being pregnant is a pivotal event of life and giving birth is an event of transition from challenge to celebration.[3]

Every woman, who ever experienced labour, can narrate a whole story about it. A woman during labour has vehement experience that she remembers throughout her life.[4] Childbirth is complex, challenging, emotional, social, physical and transition event for every woman. First time mothers have more expectations and stress related to their delivery.[5] Positive birthing experience enhances feeling of self-worth, self-esteem, self confidence among woman.[2] It also leads to good mother and newborn bonding, early adaptation to new role of "Motherhood" and increases child birth expectations positively towards future pregnancy.[2]

A normal labour with no complications not only leads to positive child birth experience but also results in sense of accomplishment and achievement[3]. It's a moment of joy and celebration for family and relatives.[3]

Need for the Study

Caesarean Section rate should not increase more than 15% as recommended by World Health Organization for developed and developing countries, an increased rate of caesarean section has been recorded.[6,7] Fear of labour pain is the major factor leading to increase rate of caesarean delivery.[8]

In Sweden every 10th woman requires professional helps due to labour related fear and anxiety.[9] Major fear among first time mothers during pregnancy is related to obstetrical interventions, actions and behavior of health care worker.[10] Negative expectations lead to a negative child birth experience. Fear related to labour is mostly resulted of frightening experiences shared between women. Such experiences result to avoid future pregnancy or natural birth and opt for caesarean delivery.[10]

Berger et al explored that during labour women required individual support and midwife must develop trusting relationship with women.[11] During labour, women need feeling of involvement, sense of security and right of making choice for interventions that affect them and the child.[11,12] Empowering women with sense of contact during birth enhances positive birth experience.[1] Professional care and support during birth along with trusting relationship enhances positive birth experience, maternal- infant attachment.[3,13]

Maternal and child cares services may be improved by empowering women in pregnancy and labor related self-care.[14,15] Key to empowered birthing is trustful relationship between parturient and midwife.[16]Childbirth satisfaction improves a women's self-worth and maternal neonatal bond. A woman with positive child birth experience breast feeds much effectively than a woman having negative childbirth experience.[17,18] Postnatal depression, breast feeding problems, issues related to

self and newborn care are caused due to negative childbirth experience.[19,20] Hudson et al explored that care provided to the women during intra and post-partum period must be focused on her child birth experience or child birth satisfaction.[21]

Antenatal educational classes prepare and empowers first time mother's knowledge related to labour process and obstetrical procedures. Prenatal education elucidates fear and anxiety related to labour.[22] Planned prenatal education program on child birth preparation provides knowledge to women on procedures of labor and relaxation techniques for pain relief.[23]Scripted medicalization of labor in many developing countries has not led to positive child birth experiences among pregnant women. [24]

Till now, any combined intervention for pregnant women with goal to develop positive birth experience and improve maternal-neonatal outcome, with component on birth preparedness, awareness on labor process, procedure and self-care, breast feeding and new born care had not been documented in India. In addition, in developed countries, midwives are playing a major role in promoting birthing classes. Investigator found it interesting and challenging that how such multicomponent birth preparation package for primigravidae would be implemented in rural health setting of a developing country like India. To introduce such an intervention in care regime during pre-natal period is novel in India.

Review of Literature

I) Review related to childbirth experience and associated factors

II) Childbirth preparation and interventional package

Childbirth experience and associated factors-

An exploratory survey with an aim to assess relationship between pregnancy expectations and anxiety and relationship between expectation and birth experience among 289 pregnant women at 36th week of pregnancy. Results revealed that pregnant women having positive expectation were having positive birth experience. Women having anxiety during pregnancy had less positive expectation of birthing. Study concluded antenatal women positive expectation related to child birth results in positive child birth experience.[25]

Exploratory study was conducted to identify factors associated with child birth satisfaction. 60 postnatal women filled McGill Pain Questionnary, Labour Agentry Scale and Mackey Child birth Satisfaction Rating Scale. Findings suggested that personal control during labor was associated with child birth satisfaction ($p = 0.0045$)[26]

Childbirth Preparation and Interventional Package

An experimental study was conducted in Egypt among primigravida women to assess effectiveness of prenatal nursing interventions on fears of childbirth, emotional well-being and obstetrical outcome among first time pregnant women. Random allocation of samples to experimental and control group was done. Results revealed that experimental group receiving intervention had significant reduction in fear, improved emotional wellbeing and good obstetrical outcome as compared to control group($p<0.001$). Study concluded psychoeducational intervention nursing program have positive effect on pregnancy outcomes and psychological well-being and reduce child birth fear.[27]

Title of the Study

Efficacy of Comprehensive Child Birth Preparation Package on Child birth experiences and maternal-neonatal outcomes among primigravidae in selected health centre of Noida, Uttar Pradesh.

Study Objectives

Primary Objectives: -

1. Explore child birth preparedness and child birth experiences among primigravidae in selected health centre.
2. Develop and implement a need based Comprehensive Child Birth Preparation Package for primigravidae.
3. Assess the efficacy of Comprehensive Child Birth Preparation Package on child birth experiences among primigravidae.
4. Assess the efficacy of Comprehensive Child Birth Preparation Package on selected maternal- neonatal outcomes among primigravidae.

HYPOTHESIS

H_1- Primigravidae in experimental group will have positive child birth experiences than the primigravidae in control group at 0.05(For two tailed test)

H_2- Primigravidae in experimental group will have better maternal-neonatal outcome than the primigravidae in control group at 0.05(For two tailed test)

ASSUMPTIONS

1. Prospective parents expect joyful and safe birthing.
2. Magnitude of self-control during labor is associated with the child birth experience.
3. Childbirth experience have pervasive physical and psychological impact on the women's health.
4. Primigravidae will be able to express their child birth experience.
5. Primigravidae will be willing to share experience frankly and honestly.
6. Educational program modifies individual behavior for better health.

RESEARCH VARIABLE

1. **Independent Variable**- Comprehensive Child Birth Preparation Package.
2. **Dependent Variables** –
    a) Child birth experience
    b) Maternal-neonatal outcome.
3. **Extraneous Variable-** age, qualification, socio-economic status

OPERATIONAL DEFINITION

1. **Child Birth Preparedness-** It refers to awareness, health practices, belief, childbirth expectation (as measured by Wijma Childbirth Expectancy Questionnaire) and preparation related to childbirth among primigravidae as measured by Childbirth preparedness checklist on 24-32 week of pregnancy

2. **Child Birth Experience-** It refers to the self-reported child birth experience of primigravidae as with Wijma childbirth experience questionnaire on 3rd postpartum day.
3. **Comprehensive Child Birth Preparation Package-** it's a multicomponent package designed to prepare primigravidae to develop positive experience to child birth which includes aspect related to labour preparation, its process, self-care, Mother-Fetal well Being, Newborn Care related aspects and infant feeding. Program will be delivered to mothers in small groups by the investigator herself in various sessions, each session may last up to 1 hour.
4. **Maternal Outcome & Neonatal Outcomes-** refers to labor outcome, breast feeding self-efficacy, postnatal problems of mother and neonate, Maternal-Infant Attachment and gain in weight of infant.

    a) **Labor Outcome**- includes nature of delivery, period of gestation at delivery, interventions during labor as collected from hospital records.
    b) **Breast Feeding Self Efficacy (BFSE**) – refers to antenatal women's self-confidence on breast feeding their new born as assessed by BFSE Scale.
    c) **Postnatal Problems of Mothers-** refers to postpartum problems of primigravidae during 6^{th} week of delivery such as pyrexia, back ache, cramps, constipation, sored, cracked nipples and engorged breast as measured by semi structured questionnaire.
    d) **Postnatal Problems of Neonates-** refers to problems experienced by neonates during 6^{th} week after birth such as fever, jaundice, colic and skin rashes.

e) **Maternal Infant Attachment**-refers to bonding between mother and newborn as measured by Maternal-Infant Bonding Questionnaire at 6th postpartum week.

f) **Infant weight Gain-** refers to difference in gain in weight of infant from the birth weight as measured at 6th postpartum week.

g) **Primigravidae -** those women who are in 24th -32 wks. of pregnancy.

DELIMITATIONS OF STUDY

Delimitations of the study are: -

1. Primigravidae visiting selected community health center of Noida.
2. Primigravidae in the 24-32 weeks of gestation.
3. Interview schedule and record analysis as methods of data collection
4. Labor outcomes are delimited to clinical records obtained from selected health centre.

RESEARCH METHODOLOGY

Research approach: Mixed Method Approach

Phase I- Exploratory Survey Design

Phase II- Randomized Control Design

Group	**Pre-test**	**Treatment**	**Post-test (3rd day)**	**Post-test (6th week)**
R E	**O1**	**X**	**O2**	**O3**
R C	**O1**		**O2**	**O3**

O_1: pre-test before treatment (Child birth preparation & Child birth Expectancy)

X: Comprehensive Child Birth Preparation Package (four days session per week)

$\mathbf{O_2}$: post-test on 3 postpartum day (Labor outcome {nature of delivery, period of gestation at delivery, interventions during labor}, BFSE, Postnatal problems of mothers {pyrexia, back ache, cramps, constipation, sored, cracked nipples and engorged breast}

$\mathbf{O_3}$: post-test at postpartum 6^{th} week (Baby weight gain, Mother New-born Attachment & Postnatal problems of mothers and new-born (fever, jaundice, colic and skin rashes)

POPULATION-

Target Population- Primigravidae in 24-32 weeks of pregnancy.

Accessible Population- Primigravidae in 24-32 weeks of pregnancy. Visiting selected health centre of Noida (UP)

SAMPLE SIZE- Power sampling was used to determine the sample size for the main study. The effect size was calculated based on the findings of the prior study with alpha (α) of 0.05 and precision at t (β) .80

Cohen —d was calculated where effect size found to be 00.43

Assuming that sample study gave a good estimation of effect size of population.

Estimating study attrition, total number of subjects needed in the present study was 105 in each group (total 210)

RESEARCH SETTING-

Setting of study was selected by convenient sampling. Study will be conducted at Dadri Community Health centre located in sector 52 of Noida and covering the population of 2 lakhs.

SAMPLING TECHNIQUES-

Subjects allocation by random sampling. Concealed allocation will be done.

Inclusion & Exclusion Criteria

Inclusion Criteria

1. Primigravidae in 24-32wks. of pregnancy.
2. Antenatal Registration of the women with the health center
3. Primigravidae up to 35 years of age.
4. Primigravidae willing for delivery and post-partum care in selected health center.

Exclusion Criteria

1. History of habitual abortion.
2. Pregnancy complications like Malpresentations, eclampsia, gestational diabetes mellitus.

TOOL & TECHNIQUES:

Tool 1: Demographic Schedule- Subject information of their age, residence, qualification, socioeconomic status

Tool 2: Semi-Structured Questionnaire on Childbirth Preparedness- Semi Structured Questionnaire will be developed by investigator to assess child birth preparation.

Tool 3: Wijma Delivery Expectancy Questionnaire-A & B- It is a 33 item, Likert scale questionnaire developed by Wijma K to measure expectation (WDEQ-A) and experiences (WDEQ-B) before and after birth, scoring from 0 to 6. The range of scores are 0 to 165. Higher the score more the fear of delivery. The tool will be translated in Hindi, the reliability and validity of the tool will be determined.

Tool 4: Mother-Infant Bonding Questionnaire- is a self-report questionnaire developed by Kumar to measure maternal-new born bonding comprising of 9 items: loving, disappointed, possessive, neutral, resentful, protective, dislike, joyful, aggressive. It is a four-point Likert scale

(0-3 scores). Total scores ranging from 0-27. The tool is available in English which will be translated into Hindi and reliability, validity will be determined.

Tool 5: Breast Self- Efficacy Scale – is a Likert Scale of 14 items to measure mother's self-confidence and ability to breast feed was developed by Dennis. Score range from 1 to 5. The tool will be translated to Hindi and reliability, validity will be determined.

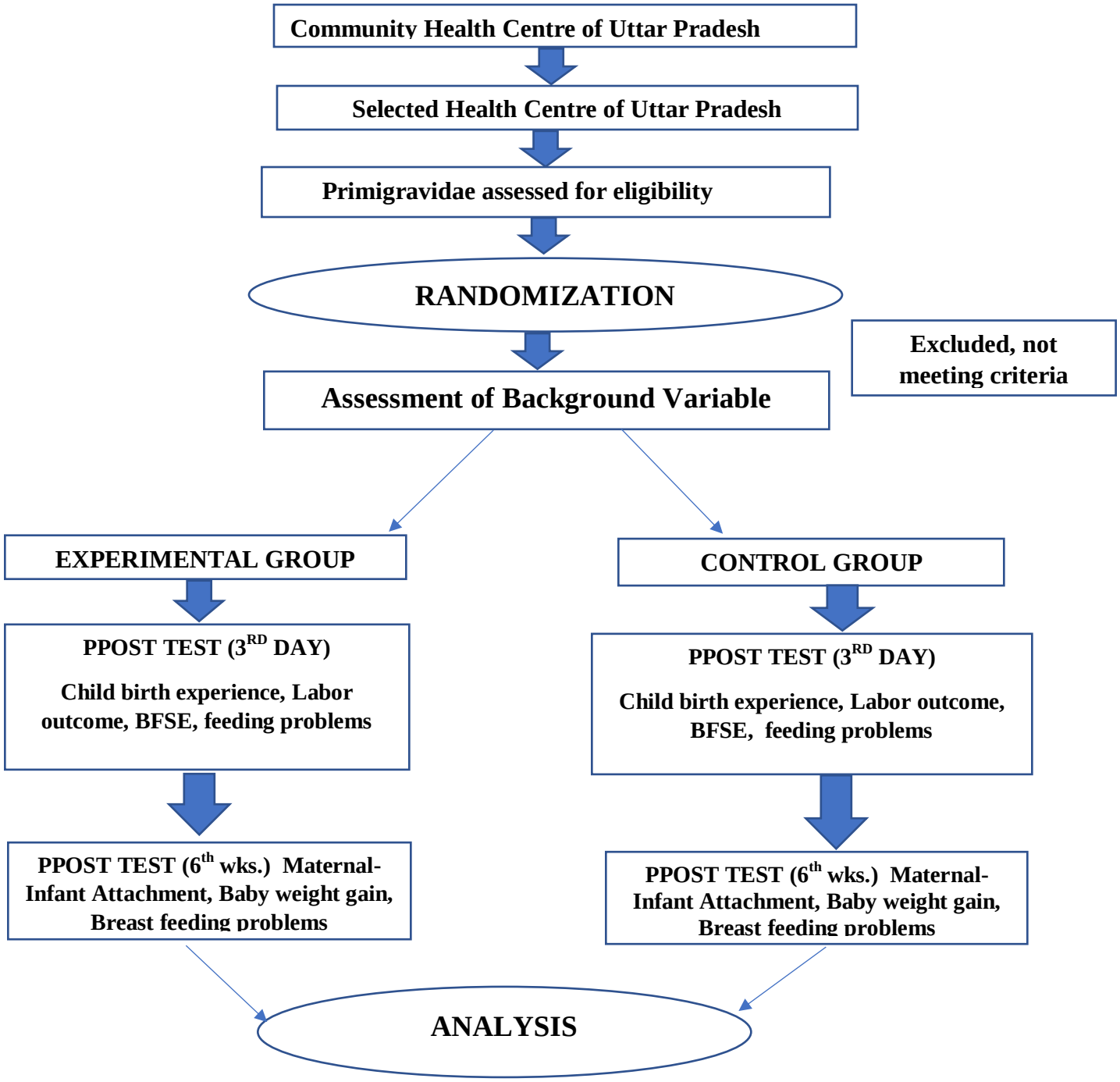
Tool 6: Structured Maternal & Neonatal Outcomes Proforma- will be developed by investigator to assess labor outcome, weight gain of infant and postnatal problems of mother and neonates.

Pilot Study- To assess methodological feasibility of the study, pilot study would be conducted among 10-20 primigravidae in each group.

Plan for Data Collection:

1. Administrative approval will be taken from Ethical Clearance committee of Swami Rama Himalayan University, Doiwala, Jollygrant, Dehradun.
2. Formal consent will also be obtained from the DHO of Noida District, UP.
3. Informed Consent will be taken from the subjects of the study.
4. Subjects anonymity and confidentiality of the information provided will be assured.

Schematic Representation


Community Health Centre of Uttar Pradesh
Selected Health Centre of Uttar Pradesh
Primigravidae assessed for eligibility
RANDOMIZATION
Excluded, not meeting criteria
Assessment of Background Variable
EXPERIMENTAL GROUP
CONTROL GROUP
PPOST TEST (3RD DAY)
Child birth experience, Labor outcome, BFSE, feeding problems
PPOST TEST (3RD DAY)
Child birth experience, Labor outcome, BFSE, feeding problems
PPOST TEST (6th wks.) Maternal-Infant Attachment, Baby weight gain, Breast feeding problems
PPOST TEST (6th wks.) Maternal-Infant Attachment, Baby weight gain, Breast feeding problems
ANALYSIS

Plan for Data Analysis- Data will be analyzed by Descriptive and Inferential statistics

REFERENCES-

1. I. Lundgren and M. Berg(2007). "Central Concepts in the Midwife- Woman Relationship", *Scandinavian Journal of Caring Sciences.*21(2): 220-228.
2. Debohra S Walker, John M Visger, Debra Rossie(2009),"Contemporary Child Birth Model", Journal of Midwifery and Women Health;54(6):469-476
3. A. Oweis and L. Abushaikha(2004)."Jordanian Pregnant Womens' expectations of their first childbirth experience", *International Journal Of Nursing Practice*.10(6):264-271
4. Hegde S, Latha KS, Bhat SM(2012),"Women's post partum depression:prevalence and associated factors among women in India",*Journal of women's Heal Issues Care*;1:1-7
5. Issacs Ashford J(1984),"The Experience Remembered". *Birth Stories,* NY: Crossing Press
6. Judith Mukamurigo, Anna Decker, Joseph Ntaganira, Marie Berg(2017)"The meaning of a poor child birth experience- A qualitative phenomenological study with women in Rwanda",*PLOS ONE*.
7. Laws P, Sullivan EA." Australia's' mothers and babies. Perinatal statistics series no.23.cat.no.PER48. Sydney: National Perinatal Statistics unit;2009.
8. World Health Organization. Monitoring emergency obstetric care: a handbook. Swizerland: Geneva;2009
9. B. Sjogren(2004),"Student Literature", *Psychosocial* Obstetrics. *Sweden.*
10. U. Waldenstrom, I. Hildingsson and E.I Ryding(2006),"Antenatal fear of childbirth and its association with subsequent caesarean section and experience of childbirth", *British Journal of Obstetrics and Gynaecology*.113(6):638-646

11. H.L. Melender(2002).”Experiences of fears associated with Pregnancy and Child Birth”,Birth.29(2):101-111
12. M.Berg, I.Lundgren, E.Hermansson and V. Wahlberg(1996).”Womens’ experience of the encounter with the midwife during childbirth”, *Journal of Midwifery*.12(1):11-15
13. E.H. Wahn, E. Nissen and B.M. Ahlberg(2005).”Becoming and being a teenage mother;how teenage girls in south western Sweden view their situation”,*Health Care For Women International*.26(7):591-603
14. S.Price, J. Noseworthy,and J.Thornton(2007).”Womens’ experience and social presence during childbirth”, The American Journal of Maternal-Child Nursing.32(3):184-191
15. R.Labonte(1994).”Health promotion and empowerment: reflections on professional practice”,*Health Education Quarterly*.21(2):253-268
16. E.Hermansson and L. Martensson(2011).” Empowerment in the midwifery context- a concept analysis”, *Midwifery*.27(6):811-816
17. Lena Nilsson, Tina horshell Elisabeth Hertfelt Wahn and Anette Ekstrom(2013).”Factors influencing positive birth experiences of first time mothers”,*Hidawi Journal Nursing Research & Practice*.
18. Leap N, Sandall J, Buckland S et al (2010).” Journey to confidence: women experiences of pain in labour and relational continuity of care”, *Journal of Midwifery Women’s Heal*;55:234-242
19. Meleis AI. Transitions Theory(2010): middle range and situation specific theories in nursing research and practices.In:Magaret PL,editor,Zuccarini NewYork(NY):Springer;2010:664

20. Mohammad KI, Alafi KK, Mohammad AI et al(2014),"Maternal and Child Health Jordanian Women's dissatisfaction with childbirth care",*International Nursing Review*;61:278-284
21. Terhi Saisto, Erja Halmesmaki," Fear of childbirth: neglected dilemma", *Acta Obstehicia et Gynecologica Scandinavica*:82(3):201-208
22. Hudson et al,"The impact of Birth Preparedness on Pregnancy Outcome", *Journal of Pregnancy Child Health*:3(4):269
23. www.womensweb.in/articles/prenatal-classes-indian-mom/
24. Farahat Amal(2015),"Effect of Implementing A Birth Plan on Women's childbirth experiences and Maternal & Neonatal Outcomes,"Journal of Education & Practice:6(6);24-31
25. Aksoy et al (2016)," The relationship between expectation, experience and perception of labour pain", *Springer Plus*,5:1766
26. GoodMan P, Mackey M.C and Tavakoli A.S(2004),"Post-natal women child birth satisfaction", *Journal of Advanced Nursing* 46(2), 212-219
27. Maaly Ebrahim EL- Malky, Samah Mohamed EL-Homosy, Eman Seif Soliman Ashour, Yasser A. Shehada(2018)"Effectiveness of antenatal nursing Intervention on childbirth's fear, psychological- well being and Pregnancy outcomes in Primiparaou's women",*Journal of Nursing*,4(2)

DECLARATION

I hereby declare that the synopsis entitled **"Efficacy of comprehensive child birth preparation package on child birth experiences and maternal - neonatal outcomes among primigravidae in selected health centre of Noida, Uttar Pradesh."** is my own original work and it has not formed the basis for the award of any degree, diploma, associateship or fellowship of similar other titles.

Signature of Supervisor

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